

Feather River Air Quality Management District

Serving the Counties of Yuba and Sutter

938 14th Street, Marysville, CA 95901

(530) 634-7659 * FAX 634-7660 * Burn Information 741-6299

Steven A. Speckert

Air Pollution Control Officer

TITLE V APPLICATION REVIEW

Permit Number: 13001

ISSUED TO:

Yuba City Cogeneration Partners, L.P.
650 Bercut Drive, Suite C
Sacramento, CA 95814

PLANT SITE LOCATION:

Yuba City Cogeneration
874 North Walton Avenue
Yuba City, CA 95993

Reviewed By:

David Valler, District Engineer

Date

Issued By:

Steven A. Speckert, Air Pollution Control Officer

Date

Nature of Business:

SIC CODE:

Power Production

4911

Responsible Official:

Name: Harold E. Dittmer
President, Yuba City Cogeneration, L.P.
Phone: (916) 447-5171

Site Contact Person:

Name: Jack Gunsett
Title: Plant Manager

TABLE OF CONTENTS

<u>TITLE V APPLICATION REVIEW</u>	1
<u>TABLE OF CONTENTS</u>	i
<u>PROPOSAL</u>	1
<u>FACILITY LOCATION</u>	1
<u>facility description and EQUIPMENT LISTING</u>	1
<u>EPA AND PUBLIC REVIEW</u>	4
<u>Applicable requirements</u>	4
<u>Federally Enforceable Conditions and Streamlining</u>	5
<u>I General Requirements And Conditions</u>	5
<u>I.M. Permit Shield and Streamlining</u>	5
<u>District Rule 3.2 Particulate Matter</u>	5
<u>District Rule 3.10 Sulfur Dioxide</u>	6
<u>District Rule 3.3 Dust and Fumes</u>	6
<u>Excess Emissions Permit Condition q</u>	6
<u>Offsets Permit Condition s</u>	6
<u>Streamlining Emergency Provisions, Upset, Breakdown, Malfunction</u>	7
<u>NSPS Emissions Rate NOx</u>	8
<u>NSPS Monitoring Requirements</u>	8
<u>II. Emission Limitations and Operating Requirements</u>	8
<u>A. Facility-Wide General Operating Requirements</u>	8
<u>B. LM-5000 Turbine, John Zink Duct Burner, HRSG (S-1)</u>	9
<u>C. Diesel-Fired Compressor</u>	10
<u>D. Cooling Towers</u>	11
<u>III Monitoring and Performance Testing</u>	11
<u>A. Continuous Monitors</u>	11
<u>B. Performance Source Tests</u>	11
<u>C. Additional Monitoring</u>	12
<u>IV Recordkeeping Requirements</u>	12
<u>A General Requirements</u>	12
<u>B. Startup Shutdown Malfunction and Emergency Provisions Records</u>	12
<u>V. Reporting Requirements</u>	12
<u>A Notification and Reporting of Emergency</u>	12
<u>B. Excess Emissions and Monitoring Report</u>	13
<u>C. Provisions for Reduced Reporting Frequency for Excess Emissions</u>	13
<u>D. Additional Quarterly Reporting</u>	13
<u>E. Annual Compliance Certification</u>	13
<u>F. Certification of Reports</u>	13
<u>G. Non-routine Reporting and Notifications</u>	14
<u>VI Locally Enforceable Conditions</u>	14
<u>Condition</u>	14
<u>Permit Condition</u>	14
<u>Explanation</u>	14
<u>VII Operating Permit Issuance, Reopenings, and Revisions</u>	15
<u>VIII Facility Emissions Units and Equipment Lists</u>	15
<u>Attachment 1. District Operating Permit</u>	16

PROPOSAL

The Yuba City Cogeneration Partners L.P. is proposing that an initial Title V Permit be issued for its existing natural gas fired combined cycle turbine electric, cogenerating facility in Yuba County, California. The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions. This analysis is in conformity to Rule 10.3 E.4.a.1.

FACILITY LOCATION

The facility is located Southwest of Yuba City at 5087 South Township Road. The facility can be found on USGS 7.5 minute topographic map Sutter (CA) latitude N39° 08' 20.59" longitude W121° 38' 31.12" The facility location is mapped in Figure 1. Sutter (CA)

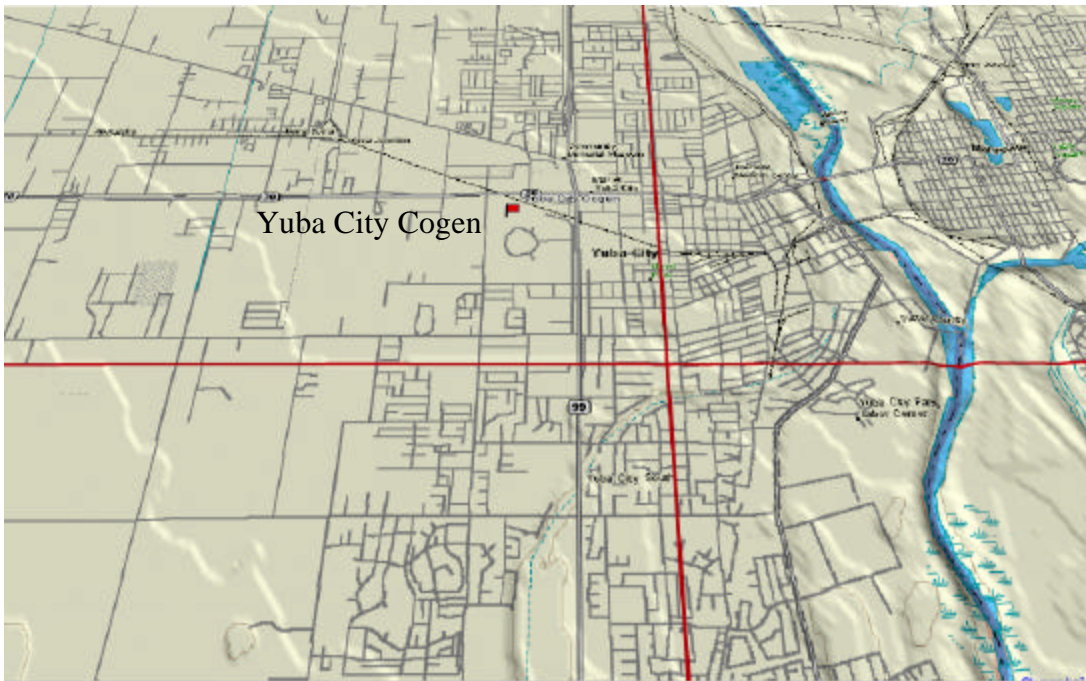


Figure 1. Location Map Yuba City Cogeneration

FACILITY DESCRIPTION AND EQUIPMENT LISTING

The overall plant operation is based on two pieces of major equipment. The Gas Turbine Generator (GTG) and the Heat Recovery Steam Generator (HRSG).

The GTG is the prime mover for the plant. It is a natural gas fired LM5000 Steam Injected Gas Turbine (STIG 120) with inlet chilled water cooling and steam injection for power augmentation and emission control. As the combustion air enters the air inlet coolers, it is cooled by the chilled water system, allowing the GTG to produce more power than air at ambient temperature. The fuel gas system supplies natural gas to the GTG through two gas compressors which

increases the pressure to 675 psig. This compressed fuel is then ignited in the combustion section of the GTG producing a high velocity mass flow into the Power Turbine. The Power Turbine is directly coupled to the Generator which produces electric power in relationship to the amount of fuel consumed and steam injected. The GTG exhausts directly into the HRSG to supply the heat needed to operate the HRSG.

The HRSG operates at three pressure levels. High pressure steam is used in the GTG for power augmentation and for NO_x emission control. High pressure steam is injected into the GTG combustors in direct ratio to the fuel consumed to reduce NO_x emissions in the GTG exhaust flow. Intermediate pressure steam is used as power augmentation to the GTG's power turbine and as export steam to Sunsweet. Low pressure steam is used as a heat source for the adsorption refrigeration units to provide inlet air chilled water. Additional heat can be obtained from the gas fired duct burner located in the GTG's exhaust duct.

The steam utilized by the GTG is discharged into the atmosphere along with the exhaust gasses. The exhaust gas is sampled/tested for NO_x (Nitrogen Oxides), O₂ (Oxygen), and CO (Carbon Monoxide). NO_x is controlled by the amount of steam injected into the GTG Nozzle Assembly.

The steam utilized by the GTG is discharged into the atmosphere along with the exhaust gas. The steam exported to Sunsweet Growers is not returned to the plant as condensate, therefore, continuous make-up of demineralized water is required.

Equipment at the facility has been classified into categories that are relevant to this permit review, and insignificant emissions units. Significant emissions units are shown in Table 1 and are included in Permit Section II. Significant emissions units are the GTG, duct burner, and a compressor powered by a 635 HP internal combustion engine. Insignificant emissions units are identified in Attachment 3 to Rule 10.3 Feather River AQMD Rules and Regulations. An insignificant activity is any activity, process, or emissions unit which is not subject to a source-specific requirement of a State Implementation Plan, preconstruction permit, or federal standard¹ and which: 1) meets the "Criteria for Specific Source Categories" or emits no more than 0.5 tons per year of a federal hazardous air pollutant (HAP)² and no more than two tons per year of a regulated pollutant that is not a HAP. The rationale for determining a source or activity at the facility is insignificant is summarized in Table 2.

¹ Federal standards include: 40 CFR Parts 60 (New Source Performance Standards), 61 (National Emission Standards for Hazardous Air Pollutants), 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories).

² HAPs are toxic substances listed pursuant to Section 112(b) of the Federal Clean Air Act.

Table 1. Significant Emissions Units.

S#	Permit #	Description	Control Device (s)
S-1	13001	Electric Generating Unit: General Electric LM5000 natural gas fired steam injected turbine-generator with JZC Model LDR-II-E 50 MMBTU/Hour duct burner and Henry Vogt Machine Co heat recovery steam generator (HRSG).	Steam injection (NOx) Low sulfur fuel (SOx) Combustion controls (NOx, CO) Limits on operating hours.
S-2	13001	Caterpillar Model 198 HCTA 635 HP Natural Gas Fired Emergency Feed Gas Compressor	Natural gas fuel. Limits on operating hours.

Table 2. Exempted And Insignificant Emissions Units (partial listing)

Source ID	Description	Capacity	Basis of Exemption
E-1	Mobile Equipment (nonroad vehicles) ¹		Rule 4.3 a. and g.
E-2	Mobile Equipment (road vehicle)		Rule 4.3 a.
E-3	HVAC equipment		Rule 4.3 d. and e.
E-4	fork lift (nonroad vehicle)		Rule 4.3 a.
E-5	Solvent cleaning tank (Safety Kleen)	30 gallon	Rule 3.14 a. Attachment 1, Rule 10.3 B.15 a
E-6	2-Ariel Compressor Frame Model JGW/Z natural gas compressors electric drive w/ evaporative coolers.	850 cfm 675 psi each	Electric
E-7	2-Trane Lithium Bromide Absorption Refrigeration Units	750 tons each	Electric
E-8	2-Atlas Copco Model GA45 Air Compressors	252 cfm at 132 psig each	Electric
E-7	Turbine lube oil tanks (vapor pressure < 1.5 psig)	N/A	Rule 3.9 capacity and vapor pressure
E-8	Emergency feedwater pump		Steam Drive
E-9	Diesel storage tank	500 gallon	Rule 3.9 capacity and vapor pressure
E-10	Marley Cooling Tower	5700 gpm	Attachment 1 Rule 10.3 B.3. (<10,000 gpm)
E-10	Brazing, welding, soldering associated with maintenance.		Attachment 1, Rule 10.3 B 17

¹ Long term measures off road industrial equipment emission standards, California SIP at 40 CFR 52.20(c)(204)(i)(A)(4) may impose future conditions on this equipment. The equipment shall comply with the SIP requirements for replacement or engine remanufacturing upon the effective date. Requirements for non-road engines are not applicable under Title V.

EPA AND PUBLIC REVIEW

This initial Title V permit is subject to notices and review in accordance with Rule 10.3 E.4. Written notice of the proposed permit, and upon request this analysis will be provided to all interested parties of record.

APPLICABLE REQUIREMENTS

The Title V permit incorporates all known applicable federal requirements in accordance with Rule 10.3 F. 1.

- a. A permit condition that addresses an applicable federal requirement shall be specifically identified in the permit, or otherwise distinguished from any requirement that is not enforceable by the U.S. EPA;
- b. Where an applicable federal requirement and a similar requirement that is not federally enforceable apply to the same emissions unit, both shall be incorporated as permit conditions, provided that they are not mutually exclusive; and
- c. Where an applicable federal requirement and a similar requirement that is not federally enforceable apply to the same emissions unit and are mutually exclusive (e.g., require different air pollution control technology), the requirement specified in the preconstruction permit (or, in the case of sources without preconstruction permits, the more stringent requirement) shall be incorporated as a permit condition and the other requirement shall be referenced.

The District has conformed to permit streamlining guidance (White Paper for Stream-lined Development of Part 70 Permit Applications 7/10/95). This effectively modifies rule 10.3. F.1 above by allowing the option to combine similar requirements into a single condition. Where streamlining was used in the permit, this analysis defines the elements of the condition and demonstrates that the most stringent federally applicable requirement was implemented.

This facility operates under the terms and conditions of District Operating Permit 13001 which have been incorporated into the Title V where the conditions are based on identifiable rules and regulations, or are part of the original new source review. This facility was reviewed for applicability under federal Prevention of Significant Deterioration (PSD) pursuant to 40 CFR 52.21. PSD is applicable to major stationary sources which include any source with emissions of any criteria air pollutants greater than 250 tons/year, and to certain listed sources when emissions of criteria air pollutants exceed 100 tons/year. In a June 24, 1990 determination issued by U.S. EPA Region IX for the construction of this facility U.S. EPA determined that the project was not a major stationary source as defined by 40 CFR 52.21(b). This was based on interpretation of the definition of a “fossil fuel fired steam generating facility of more than 250 Million BTU/hour heat input”. Attachment 2 to this document is a copy of the EPA determination. Since 1993 EPA has included natural gas fired turbines in this category.

Yuba City Cogeneration has potential NO_x emissions of 182.9 tons/year and CO emissions of 117.3 tons/year. If the facility is modified in a manner that the it is a “significant modification”

as defined by 40 CFR 52.21 occurs, then PSD will apply to the modification. For the purposes of the present permit, based on the June 24, 1990 determination by EPA, PSD does not apply.

FEDERALLY ENFORCEABLE CONDITIONS AND STREAMLINING

I General Requirements And Conditions

The general requirements are taken from 40 CFR 70.6 and District Rule 10.3 F. the requirements are applicable facility-wide. The general terms and conditions are summarized in the table below with cross references to the current District Permit to Operate (13001d), the Prevention of Significant Deterioration Permit (NSR 4-4-4 84-01) and the statutory citation.

Requirement Summary	PO 13001	PSD	Title V	Rule Local	Regulation (40 CFR)
Term	N/A	I	I.A.	Rule 10.3 F.2.o.	70.6(a)(2)
Fees	E	N/A	I.B.	Rule 10.3 F.2.p.	70.6(a)(7)
Entry	k.	V	I.C.	CH&S Code §41410, Rule 10.3 F.2.J,	70.6(c)(2)
Severability	f.	VII	I.D.	Rule 10.3 F.2. m	70.6(a)(5)
Circumvention	N/A	N/A	I.E	Rule 3.13	N/A
Defense Limitation	N/A	N/A	I.F	Rule 10.3 F.2.k	70.6 (a)(6)(ii)
Reopenings for Cause. Modification does not stay.	N/A	N/A	I.G	Rule 10.3 E. 8; 10.3 E. 2.k.	70.6(a)(6)(iii)
Information Record Submittal	N/A	N/A	I.H.	Rule 10.3 F 2 k.	70.6(a)(6)(v)
Compliance	b, g	N/A	I.I.	Rule 10.3 F.2.k	70.6(a)(6)(i)
Property Rights not conveyed	N/A	N/A	I.J.	Rule 10.3 F.2.k	70.6 (a)(6)(iv)]
Apply for Renewal	N/A	N/A	I.K.	Rule 10.3 D.2.b.	70.5(a)(1)(iii)]
Emergency Provisions	N/A	N/A	I.L. 1-4	Rule 10.3 F.2.l	70.6(g)(1-4)

I.M. Permit Shield and Streamlining

The permit shield provisions have been included in the general terms and conditions section of the permit. The permit shield provisions are authorized pursuant to 40 CFR 70.6(f). Condition M.1. provides that compliance with the conditions of the permit shall be deemed compliance with the applicable requirements, and subsumed requirements incorporated into this permit, as of the date of permit issuance. The equipment and requirements that are offered shield provisions are identified in the permit at Table 1. A permit shield applies when more stringent requirements result in presumptive compliance to a standard or term, or for conditions that are streamlined to incorporate the requirements of a term or conditions. The shield provisions apply only to listed equipment or requirements. Permit shield provisions are applicable to permit amendments issued as a final action, but may not extend to minor permit modifications in accordance with 40 CFR 70.7(e)(2)(vi).

District Rule 3.2 Particulate Matter

Shield is proposed for District Rule 3.2. The rule prohibits emissions of particulate matter exceeding 0.3 grains per standard cubic foot. Based on new source review, emission of particulate matter at the facility are limited to 2.4 lb/hour from the turbine and a combined 5.5 lb/hour from the dryer stacks (includes turbine exhaust). Based on a limit of 5.5 lb/hour and an average stack flow rate of 116,562 dscf/minute the maximum emissions from the turbine are

equal to $(5.5 \text{ lb/hour} * 7000 \text{ gr/lb}) / (116,562 \text{ cfm} * 60) = 16800 / 6993720 = 0.0055 \text{ grain/dscf}$. The limitations in section II B of the permit are more stringent than Rule 3.2, and there is no other significant source of particulate emissions. Compliance with the emission limitations and operating requirements in Section II of the permit constitute presumptive compliance with Rule 3.2.

District Rule 3.10 Sulfur Dioxide

Shield is proposed for District Rule 3.10. the rule prohibits emissions of sulfur dioxide exceeding 0.2% (2000 ppm). There are no significant sources of sulfur at the plant, and the facility operates using pipeline natural gas for fuel. Utility natural gas has very low concentrations of sulfur used for odor detection of gas leaks. The permit limits emission of sulfur dioxide to 5.8 lb/hour. Based on 0.08 lb/cubic foot of exhaust, and 6,993,720 cubic feet/hour, the permit emission limits are equivalent to $1.14 \times 10^{-8} \%$. Compliance with the emission limitations and operating requirements in Section II of the permit constitute presumptive compliance with Rule 3.10.

District Rule 3.3 Dust and Fumes

Shield is proposed for Rule 3.3. The rule sets limits on the emissions of dust and fumes based on throughput or production rate. The District has determined that Rule 3.3 is not applicable to this source. This determination means that compliance with the emission limitations and operating requirements in the permit constitute presumptive compliance with Rule 3.3.

Excess Emissions Permit Condition q

Operating permit condition q states that, “Under no circumstances shall the permittee be allowed to emit quantities of pollutants in excess of the limits specified in this permit”. This is in conflict with the provisions of paragraph “r” which excludes periods of startup, shutdown and upset breakdown under specific circumstances. Paragraph q has been deleted from the Title V based on this basic conflict, and the provisions for upset, breakdown and malfunctions has been streamlined with emergency provisions. A permit shield is proposed for permit condition q.

Offsets Permit Condition s

This facility was provided offsets by incorporating into the Sunsweet Growers, Inc. permit, a condition that steam generation be limited to 100,000 lb/hour. This condition is enforceable on Sunsweet growers. Permit condition s in the District operating permit stated:

Sunsweet Growers, Inc. has agreed to provide emission reduction offsets to Yuba City Cogeneration Partners by limiting the total steam utilized at their facility from all sources to a maximum rate of 100,000 pounds/hour.

It was the intention of the District to offset emissions at Yuba Cogeneration by limiting the steam generation from less efficient boilers at Sunsweet. Given the ownership structure of the two companies and the fact the District has made the emission reduction at sunsweet an enforceable condition in a District permit, this condition is not deemed enforceable on Yuba City Cogeneration and has not been included in their federally enforceable permit. A permit shield is proposed for condition s.

Streamlining Emergency Provisions, Upset, Breakdown, Malfunction

The permit has proposed streamlining the numerous requirements for notification of upset, breakdowns and malfunctions. These notification requirements can be found in the current operating permit conditions h and aa.; 40 CFR 70.6(a)(3)(iii)(B); District Rule 10.3 F.2.1.2. and in the NSPS 40 CFR 60.7(b) and (c).

The current permit condition h requires immediate notification and correction of any operating condition that causes excess emissions. Condition h allows for the owner or operator to request a variance in lieu of shutdown when the operating condition may persist longer than 24-hours for equipment or 96 hours for continuous monitors.

Condition aa provides for notification within two hours of equipment upset or breakdown which causes a violation of any emission limit. The local conditions also require notification within 24 hours of a continuous emissions monitor failure.

The District rules do not contain any provisions related to upset, breakdown, malfunction and related notification or reporting. The rules provide for regulatory relief in the form of variances; however the use of variances is not allowed in the federally enforceable permit. The two existing permit requirements are in conflict as to when notification must be submitted. An option to include the two hour notice and 10 day report interval in the locally enforceable conditions was considered and rejected as too burdensome. Title V regulations require the permit to include “prompt” reporting of deviations, but does not define prompt. The emergency provisions of 40 CFR 70.6(g)(3)(iv) require that the permittee must have submitted notice within two days (48 hours) of the emergency to establish an affirmative defense. Therefore the enforceable notice period for the purpose of the Title V permit was determined to be less than 48 hours based on the Title V regulations.

The District has determined that early notification is essential for the District to evaluate the severity of a deviation, and to properly respond to protect the public. The condition has been changed slightly to require notification of the District within two hours of the discovery of any emergency (e.g. upset, breakdown, malfunction). This maintains the intent of prompt notification, but does not impose sanctions on malfunctions that may not be of a significant nature, and would go undiscovered for a period of time. This also preserves the affirmative defense of an emergency ensuring notice is submitted within 48 hours.

The notice must be followed up by a written report within 15 calendar days of the upset or breakdown. The information required to be submitted in the report is specified at operating permit 13001 condition z and Rule 10.3 F.2.g.3.

In addition to the reporting requirements of a malfunction, the permittee may choose to establish the affirmative defense provisions of an emergency. In such cases, the report must include the information specified at condition V.A.2. This is based on Rule 10.3 F.2.1.2. and 40 CFR 70.6(g)(2). The report is required by Rule 10.3.F.2.1. to be submitted within two weeks. The District has determined that this is on or before 15 calendar days.

The NSPS 40 CFR 60.7(b) requires records be maintained for the occurrence and duration of any startup, shutdown, or malfunction of an operation, control device or monitoring system. Excess emissions reports are required to be submitted pursuant to 40 CFR 60.7(c). These requirements have been included in the permit at sections IV. B.1.(records) and V.B. (excess emissions

reports). The excess emissions reporting requirements are in addition to any emergency notification and report submitted.

The emergency provisions streamlining proposal attempts to simplify the multiple requirements for upsets, breakdowns and equipment failures as well as excess emission reports as contained in the current operating permit, and make the requirements consistent with the emergency provisions under Title V. The proposal includes malfunction reporting requirements consistent with the time-lines (48 hour notice and 10 day report). In addition, the recordkeeping and reporting requirements of 40 CFR 60.7 (b) and (c) are retained, and the excess emission reporting requirements of 40 CFR 60.7(c) have been included. The requirements of the District permit at conditions h and aa have been subsumed by the streamlined approach and a shield is proposed in Section I.M. of the permit.

NSPS Emissions Rate NO_x

40 CFR 60.332 requires turbine electric generators to comply with NO_x emissions determined by the following calculation:

$$STD = 0.0075 * (14.4/Y) + F \text{ for electric generators } > 100 \text{ MMBTU/hour LHV}$$

where

STD = NO_x emissions percent by volume at 15% O₂

Nitrogen % by weight

Y = Rated heat input

F = fuel bound nitrogen allowance
percent by volume

The results of this calculation indicated a limit of 46 ppm would comply with the standard. The applicant has a limitation of 29 ppm at 15% oxygen at condition II.B.5 of the permit. The NSPS limit is subsumed by the District NSR determination.

NSPS Monitoring Requirements

40 CFR 60.334 specifies an indirect monitoring method using fuel consumption and the ratio of water to fuel to determine NO_x emissions. The permittee uses continuous emissions monitoring to determine NO_x emissions. Permit condition III.A.1.a. subsumes the NSPS monitoring requirement by providing more stringent direct monitoring.

The applicant has complied with the Authority to Construct provision to install continuous monitors for NO_x, CO and O₂. All requirements and recordkeeping related to determination of NO_x emissions by measurement of water injection rate in accordance with 40 CFR 60.334 have been subsumed and will not be included in the permit. A shield for the monitoring provisions of 40 CFR 60.334 is proposed.

II. Emission Limitations and Operating Requirements

A. Facility-Wide General Operating Requirements

Section II.A. of the permit is derived from the current District operating permit, SIP approved District Rules and New Source Performance Standards 40 CFR 60 subparts A and GG. The conditions are applicable facility-wide and are not specific to any equipment or operation.

Condition II.A.1. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. This requirement is derived from 40 CFR 60.11(d) and permit to operate condition g. The specific language is taken directly from the NSPS requirements.

Condition II A.2. The requirements for adequate and safe sampling facilities are required by operating permit 13001 condition v and 40 CFR 60.8(e). The condition uses the language of 40 CFR 60.8(e) which is more specific and more stringent.

Condition II.A.3. Implements SIP approved District Rule 3.0 which prohibits visible emissions greater than 40% opacity. The opacity limit is applicable for all sources unless a more stringent opacity limitation is specified for an emission source as a result of a federally enforceable standard. This condition did not previously appear in the operating permit.

Condition II.A.4. Implements SIP approved District Rule 3.16 which requires the permittee to take reasonable precautions to prevent emissions of fugitive dust beyond the property line. This condition was included as part of P.O. 13001 g.

Condition II.A.5. Implements SIP approved District Rule 3.14 which requires containers of solvent larger than 55 gallons to contain instructions to be stored in a closed condition.

B. LM-5000 Turbine, John Zink Duct Burner, HRSG (S-1)

Conditions in this section are specifically applicable to the turbine and duct burner emissions through the heat recovery steam generator (HRSG). Limitations are based on current permits, New Source Performance Standards and SIP approved District Rules. This facility has a district operating permit based on authority to construct permits.

Condition II.B.1. requires injection of steam to control NOx emissions. The requirement appears in the facility description section of the operating permit, but is an enforceable BACT determination for the original construction. Steam injection is also For the purposes of Title V it has been located in the federally enforceable operating terms and conditions.

There is no condition currently applicable to the John Zink duct burner described in the operating permit 13001.

Condition II.B.2. allows 6862 hours per year of operations. This limiting condition is applicable on an annual basis and is included in condition II.B.5. annual limits. The condition does not limit any specific quarterly emission rate. The operating hours were authorized at 6900 hours per year prior to the installation of the IC engine powered compressor. The compressor emissions are offset by the reduction in operating hours for the turbine.

Condition II.B.3. implements permit to operate condition r. Emission limitations for the unit are expressed in lb/hour and ppmv at 15% oxygen. A daily limit is also specified. Hourly mass limits (lb/hour) and concentrations (ppmv) are enforced on a 3-hour rolling average. Excess emissions are defined in condition II.B.5. Condition II.B.3. requires that the owner or operator shall not discharge or cause the discharge into the atmosphere from turbine and duct burner, gases that exceed the following limits. Note that the excess emissions are defined in condition 5, and conditionally exclude startup, shutdown, flame stabilization, upset and breakdown conditions.

Emission Limitations*

Pollutant	lbs/hr	ppmv	lbs/day
ROG	5	--	120
NOx (as NO ₂)	53	29	1272
SOx	0.33	--	8
CO	34	--	816
PM	3.8	--	92

* All values are calculated on a dry basis and the pollutant concentration values are corrected to 15 percent oxygen (O₂). All emission limits shall be measured on a 3-hr average (an average of three one hour tests) for the purpose of annual source testing.

Condition II.B.4. is a new condition implementing a quarterly and annual emission profile. This information is included in the permit to assist with implementation of Rule 10.1 (new source review) which requires that offsets and emissions reduction credits be based on calendar quarters. FRAQMD has established that the quarterly limits should be calculated using the daily limits times the number of days in each quarter (e.g., Q1=90, Q2=91, Q3=92, Q4=92 days per quarter).

Pollutant	Q1 (lbs)	Q2 (lbs)	Q3 (lbs)	Q4 (lbs)	tons/yr
ROG	10,800	10,920	11,040	11,040	17.1
NOx (as NO ₂)	114,480	115,752	117,024	117,024	181.8
SOx	713	721	729	729	1.1
CO	73,440	74,256	75,072	75,072	116.7
PM	8,208	8,299	8,390	8,390	13.0

Condition II.B.5.a. defines excess emissions as any consecutive 3-hour period during which the average emissions as measured by the continuous monitoring system or alternate method, exceeds the emission limits set for each pollutant in Condition 3 above.. Determination of excess emissions is based on results of continuous emissions monitoring systems (CEMS) for NOx and CO or "alternate methods" (e.g. source tests). The District narrowly determines alternate methods means performance source tests and verifiable emissions calculations (i.e. 40 CFR §334).

Condition II.B.5.b. implements the compliance language in P.O. 13001 r and provides that excess emissions indicated by the CEM system or alternate method shall be considered violations of the applicable emission limit for the purposes of this permit, except conditionally during periods of startup and shutdown as defined in the permit and upset/breakdown conditions if reported to the District, and considered as qualifying upset/breakdown conditions.

Condition II.B.6. defines startup and shutdown limitations as specified at condition I of the operating permit. Language has been added to clarify that excess emissions must be recorded in order to comply with 40 CFR 60.7(b). Recordkeeping provisions consistent with 40 CFR 60.7 are included in the permit at condition IV.B.

C.. Diesel-Fired Compressor

A standby gas compressor driven by a diesel fueled Caterpillar; Model 198 HCTA engine is permitted at the facility. The owner/operator accepted as a limiting condition that the engine use

shall not exceed 1000 hours per year, and provided offsets for the engine operation by limiting hours of operation at the turbine. That condition is included at condition II.C of the permit. Condition II.B.2. of the permit limits operating hours of the turbine.

D. Cooling Towers

The cooling tower is rated at 5700 gallons per minute and is therefore an insignificant emission unit in accordance with attachment 1 to Rule 10.3. The cooling tower is likely to be a minor source of particulate matter from spray drift, and is equipped with mist eliminators. There are no rules or permit terms that limit the operations or quantify the emissions from this equipment. Rule 11.3 and 40 CFR 63.400 prohibit the use of hexavalent chrome containing compounds in such cooling towers. This is the only identified federally enforceable limit applicable to the unit.

III Monitoring and Performance Testing

A. Continuous Monitors

Condition III.A.1. is the requirement for continuous monitoring equipment and specification as required in permit to operate condition x. Condition x also contains calibrations gas standards and documentation. This condition appears separately in the Title V permit at III.A.5.

Condition III.A.2. requires a quality assurance and quality control (QA/QC) program. This is a new requirement in the permit and implements Appendix F to 40 CFR Part 60. The facility is subject to 40 CFR Part 60 subpart GG. The source demonstrates compliance with emissions limitations through the use of continuous monitors, and Appendix F is applicable. The applicant may request a compliance schedule if a quality assurance program is not available. NSPS requirements are incorporated into the permit pursuant to District Rule 10-6.

Condition III.A.3 and 4. require an annual relative accuracy test audit, and quarterly CGAs of continuous monitors. These conditions implement requirements of 40 CFR Part 60 and do not appear in existing permits. Relative accuracy tests are preformed annually and cylinder gas audit occur in each quarter when the RATA is no performed.

Condition III.A.5. implements the calibration gas standards in the District permit 13001 x. These are existing permit conditions and are considered enforceable by the district; however, the provisions may overlap condition III.A.2. which includes (by reference) requirements on calibration gases.

B. Performance Source Tests

The requirement for performance source tests to be performed every two years is found at district permit condition w, and is based on 40 CFR 60.8(c). The District requires testing every two years, or sooner if needed. For the purposes of annual testing, the district requires the unit to be operated at its maximum operating capacity (see III.B.2).

The source must be tested to determine emission rates for NO_x, CO and total organic gas (i.e. non-methane hydrocarbons). "Emission rates" means mass emissions in pounds per hour; therefore stack-flow must be determined. The District may require testing for PM or PM-10 at its sole discretion. SO_x emissions may be determined from mass balance equations using natural gas quality data. The District permit did not specify flow determination or reporting of emission concentrations. A requirement to determine emissions in pounds per hour and concentrations corrected to 15% oxygen has been added to the requirement for clarification.

III.B.3. includes applicable criteria from 40 CFR 60.8(f) for test conditions and data consolidation. This requirement was not included in earlier district operating permits and implements NSPS test requirements pursuant to Rule 10-6.

C. Additional Monitoring

The facility does not have a flue gas flow monitor. Flow is calculated using measurements of fuel flow and f-factors. Condition III.C.1. implements flow determination for continuous monitor reporting purposes.

The determination of sulfur content in fuel is required by the NSPS at 40 CFR 60.335(d). Condition III.C.2. has been added to implement this requirement.

The facility shall install a cumulative operating hour meter on the emergency engine. This condition is necessary to enforce the limits on hours of operation used to exempt this source from new source review and offsets.

IV RECORDKEEPING REQUIREMENTS

A General Requirements

Condition IV.A.1 implements general record requirements of Title V from Rule 10-3.F.2.f.; and 40 CFR 70.6(a)(3). Similar condition were not issued in previous permits.

Condition IV.A.2. is based on operating permit condition y, and adds the requirement to maintain “support information” as required in 40 CFR 70.6(a)(3)(ii)(B).

Record retention under Title V is required for five years. Permit to operate condition y required two year record retention. The more stringent five year record retention requirement was used at IV.A.3.

B. Startup Shutdown Malfunction and Emergency Provisions Records

Condition IV.B.1. implements 40 CFR 60.7(b) requiring that the facility maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is in-operative. This condition supports reporting requirements in Section V of the permit.

Condition IV.B.2. implements emergency provisions of Rule 10.3 F.2.1.2.e. and 40 CFR 70.6(g)(2). These are not mandatory records, but are required to create an affirmative defense in the event an emergency condition exists that causes excess emissions.

V. Reporting Requirements

A Notification and Reporting of Emergency

The streamlining of the emergency provisions and malfunction, breakdown and upset conditions is discussed in Section II.M. of this analysis. Notification of upset or breakdown conditions that cause a deviation from permit conditions is required in both the current permit and by Title V regulations. Permit condition aa requires notice within two hours of the upset or breakdown condition, and is not based on any identifiable rule. The Title V regulations at 40 CFR 70.6(a)(3)(iii)(B) simply specify prompt notification, and allow the permit authority to use

judgment on what is prompt based on severity of the emergency. The Title V regulations require that notice be provided within 48 hours for a permittee to establish the affirmative defense of an emergency.

The District has determined that early notification is essential for the District to evaluate the severity of a deviation, and to properly respond to protect the public. The condition has been changed slightly to require notification of the District within two hours of the discovery of any emergency (e.g. upset, breakdown, malfunction). This maintains the intent of prompt notification, but does not impose sanctions on malfunctions that may not be of a significant nature, and would go undiscovered for a period of time.

The notice must be followed up by a written report within 15 calendar days of the upset or breakdown. The information required to be submitted in the report is specified at operating permit 13001 condition z and Rule 10.3 F.2.g.3.

In addition to the reporting requirements of a malfunction, the permittee may choose to establish the affirmative defense provisions of an emergency. In such cases, the report must include the information specified at condition V.A.2. This is based on Rule 10.3 F.2.1.2. and 40 CFR 70.6(g)(2). The report is required by Rule 10.3.F.2.1. to be submitted within two weeks. The District has determined that this is on or before 15 calendar days.

B. Excess Emissions and Monitoring Report

The reporting of excess emissions is based on 40 CFR 60.7(c). The excess emissions and monitoring report is required in addition to any emergency reporting in section V.A. The excess emissions and monitoring report is required to be submitted to both U.S. EPA and the District. These conditions were not included in the District operating permit. The District has determined that the source is subject to 40 CFR Part 60 subpart GG and the reporting requirements are applicable. The default reporting frequency is every calendar quarter.

C. Provisions for Reduced Reporting Frequency for Excess Emissions

A provision for reduced reporting frequency is included in the permit as provided by 40 CFR 60.7(e). The provision is directly from the regulation and can be implemented without a permit modification provided the conditions and notification requirements are met. Reduced frequency of reporting requires approval from the permitting authority.

D. Additional Quarterly Reporting

The permit to operate condition z requires the submittal of emissions data from continuous monitors, logs of maintenance for the gas turbine, duct burner and emission control equipment; operating hours and fuel use of the gas turbine and duct burner; and the production rates of steam and electricity. The district operating permit rule 10.1 is SIP approved and the reporting condition is enforceable.

E. Annual Compliance Certification

An annual compliance certification for the Title V permittee is required pursuant to Rule 10-3 F.2.n. and 40 CFR 70.6(b)(5).

F. Certification of Reports

All reports are required to be submitted with a certification specified by Rule 10-3 D.3.a.13 and 40 CFR 70.5(d).

G. Non-routine Reporting and Notifications

The conditions in this section were not previously included in District operating permits but are applicable to the NSPS source. These non-routine reports are required pursuant to Rule 10-6 and 40 CFR 60.7(a). The conditions will only have effect in the event of a facility modification or replacement of monitoring equipment.

Conditions V.G. 1. through 3. implement notification requirements for new and modified facilities at 40 CFR 60.7(a)(1) through (3). If the facility is modified, any authority to construct permit issued by the District will require notification of startup as a standard condition.

40 CFR 60.7(a)(5) requires notification of demonstration of the continuous emissions monitors, and has been included at condition V.G.4 of the permit.

40 CFR 60.7(a)(4) requires a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which standard applies. This notification has not been included in the permit because in the judgment of the District it is subsumed by a requirement to apply for a permit modification pursuant to Rule 10.1. Any changes to the facility that may increase the emission rate of air pollutants would be subject to new source review and permit modifications as outlined in section VII of the permit.

VI Locally Enforceable Conditions

Conditions that are based on district rules that are not part of the State Implementations Plan, or requirements for which no specific authority could be identified have either been removed from the permit as discussed in the shield provisions (II.M), or included in a locally enforceable section of the permit. Permit section VI identifies locally enforceable provisions. Pursuant to 40 CFR 70.6(b)(2), the rules of this section are enforceable by local permit authorities and shall not be enforceable by U.S. EPA or any citizen. This section is exempt from compliance certification requirements of 40 CFR 70.6, and administrative requirements for permit issuance and permit review of 40 CFR 70.7 and 70.8. All other sections of the permit are considered federally enforceable.

The following conditions are found in Section VI. An explanation of the reason these requirements are not federally enforceable is included.

Locally Enforceable Terms and Conditions

<u>Condition</u>	<u>Permit Condition</u>	<u>Explanation</u>
P.O. 13001 j	Operating staff of the subject facility shall be advised of and familiar with all conditions contained herein.	No applicable rule. Condition of local permit. Strict liability in section I.I. of Title V subsumes this requirement.
N/A	Hot Spots The District reserves the right to require the permittee to reevaluate the health risk, in accordance with the Emission Inventory Criteria and Guidelines Regulation if there is a significant change in population, emissions or new health data becomes available.	California Air Toxics Hot Spots requirements are not federally enforceable SIP requirements.

<u>Condition</u>	<u>Permit Condition</u>	<u>Explanation</u>
N/A	<p>Portable Sources</p> <p>The operation of portable equipment at the facility shall not require modification of this permit provided that the permittee verifies that the portable source is registered with CARB in accordance with CCR Title 13, Article 5 §2450 - 2465.</p>	The California Air Resources Board permits portable sources. This permit is not designed to regulate or prohibit temporary portable sources.
P.O. 13001 a	This permit, or a readable reproduction, shall be posted in a conspicuous location at the source for which it was issued.	No applicable rule. Condition of local permit.

VII Operating Permit Issuance, Reopenings, and Revisions

This section was included in the permit to incorporate and streamline the provisions of 40 CFR Part 70 and District Rule 10.3. This was done because the two regulations contain inconsistencies. The terms and conditions in Section VII predominately reflect the 40 CFR and provide consistency and clarity as to the District's intent for issuing administrative permit modifications and revisions incorporating enhanced new source review procedures. This section may be deleted from the permit in the event rule changes are completed that make this section unnecessary.

VIII Facility Emissions Units and Equipment Lists

This section was included to identify the specific equipment identified as insignificant units not subject to the Federal Operating Permit. This section implements Attachment 1 to Rule 10.3 and other exemptions in District Rules.

Significant emissions units are identified and enumerated. This section replaces descriptive information in the local Permit to Operate and PSD permit.

ATTACHMENT 1. DISTRICT OPERATING PERMIT

PERMIT TO OPERATE # P13001

IS HEREBY GRANTED TO

Yuba City Cogeneration Partners, LP

873 N. Walton Ave, Yuba City, CA 95993

TO OPERATE

(1) Natural Gas Fired 49 MW Gas Turbine Cogeneration Facility

consisting of

(1) CATERPILLAR Model 198 HCTA, Serial # 68B172; 635 BHP @ 1200 rpm ICE; Natural Gas fired; driving an Emergency Feed Gas Compressor

(1) GENERAL ELECTRIC Model 7LM5000-GE-NGA Natural Gas Fired Gas Turbine
with

(2) WOODWARD Model 501 Digital Control Systems used as a Master Sequencer / Fuel Supply Management System

(1) BRUSH ELECTRIC MACHINES LTD. Model BDAX 7-290ER Gas Turbine Generator
rated at

60 Hertz, 3-Phase, Wye connected, 3,600 RPM, 13.8 kv and 55.45 MVA

(1) HENRY VOGT MACHINE COMPANY Heat Recovery Steam Generator
rated at

725/350/100 psig and 112,400 / 75,950 / 28,375 lbs/hr

(1) 50 MM Btu/hr JOHN ZINK COMPANY Model LDR-II-LE Natural Gas Fired Duct Burner

(1) 30.6 MVA MAGNETEK ELECTRIC Step-up Transformer

(1) 2000 KVA SIEMENS Auxiliary Transformer rated at 4.160 KV

(1) 2000 KVA SIEMENS Auxiliary Transformer rated at 0.480 KV

(2) ARIEL COMPRESSOR FRAME Model JGW / Z Natural Gas Compressors
rated at

675 psia @ 850 cfm (each)

(2) ATLAS COPCO Model GA45 Air Compressors
rated at

252 cfm @ 132 psig (each)

(1) 5,700 gpm MARLEY COOLING TOWER COMPANY Cooling Tower
rated at

51,350,000 Btu / hr

(2) TRANE Lithium Bromide Absorption Refrigeration Units
rated at

750 Tons (each)

(1) Reverse Osmosis (RO)/Demineralizer system unit

CONTINUOUS EMISSION MONITORING SYSTEM

consisting of

(1) SERVOMEX Series B 1400B Oxygen Analyzer

(1) BECKMAN INDUSTRIAL Model 951A NO / NO_x Analyzer

(1) SERVOMEX Model Xentra 4900 CO Nondispersive Infrared Analyzer

DISTRIBUTIVE CONTROL SYSTEM

consisting of

1 AAB PROCESS AUTOMATION INC. - Taylor Systems MOD 300

This permit does not authorize the emission of air contaminants in excess of those allowed by Federal, State or District Rules and Regulations. **This permit expires December 31, 2000**, and must be renewed annually.

FACILITY DESCRIPTION AND OPERATION

The Yuba City Cogeneration Partners, LP is a natural gas fired cogeneration plant producing food quality steam for the Sunsweet Growers prune processing facility and 49 MW electric power to PG&E. The facility is a peaking plant and not designed to operate during the winter months when the ambient temperature can go below freezing.

The overall plant operation is based on two pieces of major equipment. The Gas Turbine Generator (GTG) and the Heat Recovery Steam Generator (HRSG).

The GTG is the prime mover for the plant. It is a natural gas fired LM5000 Steam Injected Gas Turbine (STIG 120) with inlet chilled water cooling and steam injection for power augmentation and emission control. As the combustion air enters the air inlet coolers, it is cooled by the chilled water system, allowing the GTG to produce more power than air at ambient temperature. The fuel gas system supplies natural gas to the GTG through two gas compressors which increases the pressure to 675 psig. This compressed fuel is then ignited in the combustion section of the GTG producing a high velocity mass flow into the Power Turbine. The Power Turbine is directly coupled to the Generator which produces electric power in relationship to the amount of fuel consumed and steam injected. The GTG exhausts directly into the HRSG to supply the heat needed to operate the HRSG.

The HRSG operates at three pressure levels. High pressure steam is used in the GTG for power augmentation and for NO_x emission control. High pressure steam is injected into the GTG combustors in direct ratio to the fuel consumed to reduce NO_x emissions in the GTG exhaust flow. Intermediate pressure steam is used as power augmentation to the GTG's power turbine and as export steam to Sunsweet. Low pressure steam is used as a heat source for the adsorption refrigeration units to provide inlet air chilled water. Additional heat can be obtained from the gas fired duct burner located in the GTG's exhaust duct.

The steam utilized by the GTG is discharged into the atmosphere along with the exhaust gasses. The exhaust gas is sampled/tested for NO_x (Nitrogen Oxides), O₂ (Oxygen), and CO (Carbon Monoxide). NO_x is controlled by the amount of steam injected into the GTG Nozzle Assembly.

FACILITY DESCRIPTION AND OPERATION
(CONTINUED)

During normal operation, the Heat Recovery Steam Generator (HRSG) must be ready for operation before the Gas Turbine Generator (GTG) can be started. This is because the hot gas from the GTG passes through the HRSG.

Making the HRSG ready for operation requires placing the Feedwater System into operation and filling the three steam drums of the HRSG to the correct level for startup. The Feedwater System includes the Makeup Water, Intermediate Pressure (IP) Feedwater, and the High Pressure (HP) Feed water Pumps. An adequate amount of Demineralized Water must also be on hand.

The initial steam from the HRSG is vented to the atmosphere through silencers until it is utilized by the GTG and exported to Sunsweet Growers.

The operation of the GTG is essential for the facility operation. GTG startup and operation requires offsite power from the utility and natural gas fuel. Once the GTG is in operation and is producing power, it supplies the electrical requirements for all cogeneration plant auxiliaries and offset power is no longer required. When the GTG is started, it first accelerates to idle and then to full speed with no load. After a warm-up period, it is synchronized with the utility and loaded to approximately 15 Megawatts. After HP and IP Steam is available from the HRSG, NOx control and power augmentation is initiated. After this is accomplished the GTG is loaded to full power operation.

The operation of the plant is also dependent on a continuous supply of demineralized water to feed the HRSG. The steam utilized by the GTG is discharged into the atmosphere along with the exhaust gas. The steam exported to Sunsweet Growers is not returned to the plant as condensate, therefore, continuous make-up of demineralized water is required.

GENERAL CONDITIONS

This permit to operate shall be subject to the following conditions to assure facility compliance with all applicable rules and regulations:

- a) This permit, or a readable reproduction, shall be posted in a conspicuous location at the source for which it was issued.
- b) Operation under this permit is deemed acceptance of all conditions as specified. Failure to comply with any condition of this permit or any of the Rules and Regulations of the Feather River AQMD shall be grounds for suspension or revocation of this permit, either by the Air Pollution Control Officer or the Air Quality Management District Hearing Board.
- c) The District reserves the right to amend this permit, if the need arises, in order to insure the compliance of this facility and/or to abate any public nuisance. If any provision of this permit is found to be invalid, such finding shall not affect the remaining provisions of this permit.
- d) This permit to operate is not transferable from either one location to another, one piece of equipment to another, or from one person to another, without the written approval of the Air Pollution Control Officer. In the event the control of the subject facility is assumed by a new owner, the District shall be notified of such transfer by the submittal of a written request for transfer within ten (10) days of the change of ownership.

GENERAL CONDITIONS

(CONTINUED)

- e) The person to whom this permit to operate is issued shall be responsible for payment of annual fees. In the event of facility closure, change in ownership or responsibility, the new owner shall be responsible for the fee payment.
- f) The permittee shall obtain written approval from the District prior to making any alteration in equipment or method of operation, including hours of operation or production rate. Such change typically requires further evaluation and permit modification.
- g) The physical integrity of all process and air pollution control equipment, including pneumatic duct systems, shall be maintained at all times during plant operations to ensure minimal discharge of emissions. Any emissions from this facility shall not be visible at any point beyond the plant property lines.
- h) Any operating condition which causes an exceedance of the emission limitations as set forth in District Rules or as a condition of this permit shall be reported to the District and corrected immediately. In the event that such exceedance may persist longer than 24 hours (96 hours for monitoring equipment), the owner or operator may request an emergency variance in lieu of shutdown.
- i) The "Right of Entry" as stipulated in the California Health and Safety Code Section 41410, of Division 26, shall apply at all times.

OPERATING CONDITIONS

- j) Operating staff of this facility shall be advised of and familiar with all conditions contained in this permit.
- k) Operation of the equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit was issued.
- l) The following operating modes and limits shall apply to the gas turbine/duct burner systems:
 - The time interval for a startup shall not exceed ninety (90) minutes after initiation of fuel gas feed to the turbine.
 - The time interval for a shutdown shall not exceed forty-five (45) minutes preceding fuel gas feed cutoff to the turbine.
- m) The maximum operating parameters for the plant shall be twenty-four (24) hours/day, seven (7) days/week, operating not more than six-thousand nine hundred (6,900) hours in a calendar year (365 days). Prior to operating more than six-thousand nine hundred (6,900) hours/year, written approval must be obtained from the AQMD. Testing may be required to show that emissions are maintained at or below limits stipulated in this permit.
- n) This facility is subject to the following FRAQMD Rules and Regulations:
 - 1. Ringlemann #2 / 40% Opacity visible emission limitation.(Rule 3.0)
 - 2. Grain loading of 0.3 grains/dscf.(Rule 3.2)
 - 3. Sulfur Oxides limitation rule of 0.2 % by volume (2,000 ppm). (Rule 3.10)
- o) This facility must comply with the Code of Federal Regulations, Title 40, Chapter 1, Part 60, Subparts A and GG - Standards of Performance for New Stationary Sources.
- p) In the event that any permit condition or portion of a permit condition conflicts with any other permit condition required as part of this permit, then the more stringent condition shall apply.

EMISSION LIMITATION CONDITIONS

- q) Under no circumstances shall the permittee be allowed to emit quantities of pollutants in excess of the limits specified in this permit.
- r) The following emission limits shall apply to the gas turbine and duct burner systems. The pounds per hour (lbs/hr) emission limits shall be based on a 3-hour sliding average with increments not to exceed 15 minutes. The emission limits shall exclude normal start-up and shutdown periods and upset/breakdown conditions, if reported to the District, and considered as qualifying upset/breakdown conditions. NO_x emissions (as NO₂) shall not exceed 29 ppmvd at 15% O₂, averaged over 3 hours.

Units	<u>Pollutants</u>				
	<u>ROG</u>	<u>NO_x</u>	<u>SO_x</u>	<u>PM</u>	<u>CO</u>
LBS/HOUR (average 3 hours)	5	53	0.33	3.8	34
LBS/DAY	120	1272	8	92	816
TONS/YR	17.3	182.9	1.1	13.1	117.3

- s) Sunsweet Growers, Inc. has agreed to provide emission reduction offsets to Yuba City Cogeneration Partners by limiting the total steam utilized at their facility from all sources to a maximum rate of 100,000 pounds/hour.
- t) Emergency Compressor's Caterpillar; Model 198 HCTA; Serial # 68B172; 635 BHP @ 1200 rpm ICE is to be operated for a time period not to exceed 200 hours per calendar year.

SOURCE TESTING CONDITIONS

- u) An emissions source test shall be conducted on the facility every other year or sooner if required by the District, and shall conform to EPA or ARB methodology and procedures. Any deviation from these requirements shall first be approved by the District. A source test protocol shall be submitted to the District at least thirty (30) days prior to the scheduled test date. The District shall be notified at least ten (10) days prior to any scheduled source test. The results of the source test shall be submitted to the District within forty-five (45) days following testing.
- v) Source testing ports, platforms, and access ladders shall be provided which conform to the California Air Resources Board and Occupational Health and Safety Administration standards. Sampling ports shall be located not less than eight stack diameters downstream of any flow disturbance and not less than two stack diameters upstream of any flow disturbance, or as approved by the District.
- w) The facility shall be source tested at maximum permitted operating conditions, or as approved in writing by the AQMD, to determine the emission rates of the following pollutants: total organic gas (TOG), reactive organic gas (ROG), oxides of nitrogen (NO_x) and carbon monoxide (CO). Testing for total particulate (PM) and particulate matter of 10 microns and less (PM₁₀) shall be optional, at the discretion of the District. The oxides of sulfur (SO_x) emissions may be determined by mass balance equations. Facility operating parameters under which the test is conducted shall be reported in the test results.

MONITORING AND REPORTING CONDITIONS

- x) Continuous monitors for carbon monoxide, oxides of nitrogen, and oxygen are required to be installed on the HRSG stack and operated during facility operation. Monitors must meet federal EPA specifications and receive prescribed maintenance and calibration pursuant to manufacturer's recommendation. Documentation shall be made available to the District upon request containing gas calibration standard information, including an identification number corresponding to the gas cylinder number, gas mixture constituents and concentrations, and gas cylinder fill and expiration dates. If a gas cylinder expiration date is not provided by the gas vendor a two (2) year expiration date from the cylinder fill date shall apply. Gas calibration standards in use beyond the expiration date will be considered a violation of this permit.
- y) Records and logs of all data generated by the continuous monitors and of the date and hours of operation of the emergency compressor's internal combustion engine (item t) above) shall be maintained for a period of two (2) years and shall be available to the District staff upon request.
- z) Yuba City Cogeneration shall provide a quarterly report to the District in a format determined in consultation with the District and Yuba City Cogeneration. The quarterly report shall include the following:
 - emissions data from all continuous monitors
 - maintenance on the gas turbine, duct burner and air pollution equipment
 - operating hours and fuel use of the gas turbine and duct burner including the steam injection rate to the gas turbine
 - electric and steam production rates
- aa) The District shall be notified within two (2) hours of any upset/breakdown condition which causes a violation of any emission limit as prescribed by District rules or as a condition of this permit, or within twenty-four (24) hours of any failure or malfunction of any required continuous monitoring equipment. Within ten (10) days after an upset/breakdown condition, the permittee shall submit a written report to the District, including the following:
 - duration of excess emissions
 - estimate of quantity of emissions
 - statement of cause
 - corrective measures taken

ISSUE DATE:

EFFECTIVE DATE: January 1, 2000

ISSUE DATE: January 24, 2000

PERMIT NUMBER P13001

STEVEN A. SPECKERT
AIR POLLUTION CONTROL OFFICER